

REMARKS**Amendments to the Specification**

The “Related Applications” paragraph has been amended to update the status of each related application. The “Government Support” paragraph has been moved so that the “Related Applications” paragraph immediately follows the title.

Amendments to the Claims

Claims 9 and 10 have been cancelled because they are directed to non-elected subject matter.

Claims 1-7 have been amended to cancel non-elected subject matter drawn to SEQ ID NOs: 3-12.

Claims 1-8 have been amended to draw the claimed polypeptides or polynucleotides to those relating to Ca^{2+} , Mg^{2+} , or Na^{+} ion concentrations as supported in the application in Example 6, beginning at page 39.

Claim 8 has been amended to recite “an isolated polypeptide encoded by a nucleic acid sequence of a clone deposited under ATCC No.: 209602.” This amendment has been made to make the claim more consistent and definite, and is not intended to narrow the claim in any way.

Restriction Requirement

The claims have been amended to the subject matter elected by Applicants. Applicants reserve the right to file a continuing application or take such other appropriate action as deemed necessary to protect the cancelled subject matter. Applicants do not hereby abandon or waive any rights in the cancelled subject matter.

Objection under 37 C.F.R. § 1.78

The Examiner objected to the content and location of the Related Applications paragraph. Applicants have amended the Related Applications paragraph to follow the title of the application and have updated the status of applications therein. Applicants respectfully request that the objection be withdrawn.

Objection under 37 C.F.R. § 1.821-1.825.

The Examiner objected to sequences in various Figures. Applicants have amended Figures 4A-4E, 5A-5D, and 16A-30C to add the corresponding polynucleotide and/or polypeptide SEQ ID NOs to comply with 37 C.F.R. § 1.821-1.825. Applicants respectfully request that the objection be withdrawn.

Rejection under 35 U.S.C. § 112, Second Paragraph.

The Examiner rejected Claim 8 under 35 U.S.C. § 112, second paragraph, as being indefinite. Applicants have amended Claim 8 to recite “an isolated polypeptide encoded by a nucleic acid sequence of a clone deposited under ATCC No.: 209602.” It is believed that the rejection has been overcome and Applicants respectfully request that it be withdrawn.

Rejection under 35 U.S.C. § 112, First Paragraph.

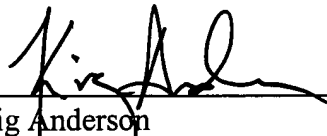
The Examiner rejected Claims 1-8 under 35 U.S.C. § 112, first paragraph. Claims 1-8 have been amended to draw the claimed polypeptides or polynucleotides to those that allow fish to sense or adapt to Ca^{2+} , Mg^{2+} , or Na^{+} ion concentrations, as disclosed in the specification. It is believed that the rejection has been overcome and Applicants respectfully request that it be withdrawn.

CONCLUSION

In view of the above amendments and remarks, it is believed that all claims are in condition for allowance, and it is respectfully requested that the application be passed to issue. If the Examiner feels that a telephone conference would expedite prosecution of this case, the Examiner is invited to call the undersigned.

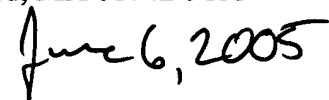
Respectfully submitted,

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Dated:



Amendments to the Drawings

Figures 4A-4E, 5A-5D, and 16A-30C have been amended to add the corresponding polynucleotide and/or polypeptide SEQ ID NOs as supported in the “Brief Description of the Drawings” on pages 6-8. No new matter has been added by these amendments.

Attachment: Annotated Marked-Up Drawings